

Mass and Volume

1. Measuring Mass – The amount of matter in an object is its MASS. We measure mass using an instrument called an electronic balance. The metric unit of mass that the balance uses is the gram. The kilogram is another commonly used unit of mass. Kilograms are used for measuring the mass of large and heavy objects.

Procedure:

1. Answer these questions before you begin measuring:
 - a. What is the symbol used to abbreviate gram?_____
 - b. How many grams are in a kilogram?_____
2. Fill in the data chart.

Object	Estimation of mass in grams	Actual mass in grams	Actual ranking from lightest to heaviest
Pencil			
Plastic Cup			
Scissors			
Note Card			
Paper Clip			

2. Regular Volume – Volume is the amount of space an object takes up. Solid volume is measured in cubic centimeters (cm³) or milliliters (mL). Liquid volume is measured in milliliters or liters.

Procedure:

- 1. Fill in the data chart.
- 2. Show your work!

Object	Estimation of volume in cm ³	Actual volume in cm ³
Text Book		
Box		
Wooden Block		
Kleenex Box		

3. Irregular Volume – Volume is the amount of space an object takes up. Solid volume is measured in cubic centimeters (cm³) or milliliters (mL). Liquid volume is measured in milliliters or liters.

Procedure:

1. Fill in the data chart.

Object	Estimation of volume in mL	Original volume of water	Volume of water with object	Actual volume of object in mL
7 Pennies				
7 Washers				
5 Stones				
5 Marbles				

4. Measuring Capacity – Capacity is the volume a container will hold. It is also a measure of the matter in a container.

Procedure:

1. Answer these questions:

a. Define meniscus:_____

b. How do you read a graduated cylinder?_____

2. Fill in the data chart.

Container	Estimation of volume in mL	Actual volume in mL
Dixie Cup		
Powerade Cup		
Foam Cup		
Soda Can		